

CAPITAL PLANNING ADVISORY BOARD

Minutes of the 2nd Meeting of the 2006 Calendar Year

July 24, 2006

The 2nd meeting of the Capital Planning Advisory Board was held on Monday, July 24, 2006, at 10:00 AM, in Conference Room 102A at the System Office of the Kentucky Community and Technical College System (KCTCS) in Versailles. Representative Rick W Rand, Co-Chair, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Jack Westwood, Co-Chair; Representative Rick W Rand, Co-Chair; Representative Ron Crimm; Bradford Cowgill, Ben Fletcher, Paul Gannoe, John Hicks, Bill Hintze, and Garlan Vanhook.

Guests: Dr. Michael B. McCall, President, Kentucky Community and Technical College System; John Davies, Director, Division of Renewable Energy and Energy Efficiency, Office of Energy Policy, Commerce Cabinet; Jim Abbott, Commissioner, Ken Marks, Deputy Commissioner, Paul Gannoe, Director of the Division of Engineering and Contract Administration, and Joe Wolford, Program Coordinator for Energy Savings Performance Contracts, Department for Facilities and Support Services, Finance and Administration Cabinet; Eric Shaffer, KCTCS System Architect; and Martha Tarrant, AIA, Ross-Tarrant Architects, Inc.

LRC Staff: Pat Ingram, Mary Lynn Collins, Nancy Osborne, and Debbie Rodgers.

Representative Rand welcomed Bill Hintze back to the Board as the executive branch's new appointee representing the public. He noted that Norma Northern's term as an executive branch appointee had expired and expressed appreciation for her service on the Board.

Representative Rand also conveyed the Board's best wishes to Mary Lynn Collins who will be retiring from the staff of the Legislative Research Commission at the end of August.

Representative Crimm's motion to approve minutes of the May 23, 2006, meeting was seconded by Senator Westwood and approved by voice vote.

Representative Rand introduced Dr. Michael B. McCall, President of the Kentucky Community and Technical College System, who welcomed the Board to Versailles and the KCTCS System Office facility. He explained that the System Office is housed in a former Texas Instruments manufacturing facility in which about 80,000 square feet were renovated at a cost of approximately \$6.3 million, financed through the establishment of a public properties corporation. Rental payments to the City cover the cost of the improvements as well as maintenance and operation costs. KCTCS will take ownership after 20 years and hopes to eventually renovate the remaining approximately 40,000 square feet of the facility.

Noting there was an Information Item in the members' folders concerning the fiscal year 2005-06 General Fund surplus, Representative Rand invited Mr. Cowgill, who is State Budget Director, to comment further. Mr. Cowgill said of the \$136.5 million surplus, \$112.5 million was deposited to the Budget Reserve Trust Fund, \$12.0 million was deposited to the Teachers' Retirement System, and \$12.0 million was deposited to the Kentucky Employees Retirement System.

Representative Rand explained that the agenda for this meeting focuses on energy efficiency, which has been a long-standing interest of the Board. He introduced John Davies, Director of the Division of Renewable Energy and Energy Efficiency, to make the first presentation. Copies of his slide presentation and other materials were distributed to the members.

Mr. Davies explained that the presentation entitled "Making Sustainable Buildings a Reality" was adapted from a presentation to the White House Summit on Federal Sustainable Buildings in January 2006. He said "sustainable" or "green" buildings use resources - energy, water, materials, and land - more efficiently and effectively than buildings that are simply built to code. He added that building to code is the worst building you can legally construct. Mr. Davies noted that buildings have an impact on numerous environmental factors including electricity and energy consumption, greenhouse gas emissions, construction and demolition waste, potable water, and raw materials usage, and that people spend 90 percent of their time indoors. Design and construction practices involved in providing a sustainable building address site planning, water management, energy performance, material use, and indoor environmental quality in a manner to resolve much of the negative impact of buildings on their occupants and the environment.

Listing the benefits of sustainable buildings, Mr. Davies said they reduce the impact of natural resource consumption; enhance occupant comfort, health and productivity; minimize strain on local infrastructure and improve quality of life; increase building valuation and return on investment; increase occupancy and lease rates; and make a visionary statement about the community.

Relative to extra up-front costs of building green, Mr. Davies said a California study of 33 diverse buildings constructed over the last 10 years showed there is a construction cost premium of about 1.8 percent and that five of the buildings had no cost increase at all. The study also indicated that green improvements can pay for themselves in three years, with a 25 to 40 percent annual return on investment. Mr. Davies then reviewed the case studies of three projects including the Lincoln Hall (administration building) renovation at Berea College in Kentucky.

Mr. Davies next explained three sustainable building protocols. Energy Star is a government-backed program focusing on improved building energy efficiency. The program establishes benchmarks and certifies performance on energy use. Ratings are validated by a third party professional engineer. The High Performance Buildings program of the Sustainable Buildings Industry Council focuses on a whole building, integrated design process. Buildings are not certified. Kentucky has six Energy Star buildings, including four schools, and two High Performance schools.

The third sustainable building protocol reviewed by Mr. Davies was Leadership in Energy and Environmental Design (LEED), which is a voluntary rating system developed by the US Green Building Council. LEED requires third-party certification with evaluation and scoring in the categories of sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. There are over 3,000 building projects registered as seeking LEED certification nationwide. Twenty states have adopted legislation incorporating the LEED standards into their construction process, and 18 federal agencies require LEED. Mr. Davies noted the press release provided in the handouts announcing the recent LEED silver level certification of Toyota's North American Production Support Center in Georgetown, Kentucky. (The Berea College project also has silver level certification.)

Mr. Davies next explained that the Office of Energy Policy has played a supporting role in the Energy Efficiency Program for State Government Buildings through active participation in the areas of training, grants, and manpower including staff to work with performance contracting.

Mr. Davies concluded by saying sustainable buildings work and they "do not cost an arm and a leg to build."

In response to several questions from Mr. Cowgill about how the costs and return on a green project are evaluated, Mr. Davies said a life cycle cost analysis is done.

Mr. Cowgill asked about requirements in the 20 states that have adopted LEED legislation. Mr. Davis said they range from California, which mandates LEED certification, to requirements that LEED standards be incorporated into projects without mandating that facilities be certified.

Senator Westwood asked if the Office of Energy Policy has any recommendations for legislation in Kentucky relative to LEED. Mr. Davies said the office would like to work with the Finance Cabinet to develop policies requiring that relevant items be incorporated to address the needs of individual projects. Senator Westwood wondered if legislation that would simply require going through a checklist would be appropriate. In response to Mr. Vanhook's question, Mr. Davies said any legislation would apply only to state construction projects, not the private sector.

Mr. Hintze said this topic is relevant to the planning process since such issues should be addressed at the earliest point in the process when projects are being proposed. He added that, nevertheless, not all state projects are authorized or undertaken based on what was initially planned.

Representative Rand asked to what extent projects currently are reviewed relative to their energy efficiency and sustainability. Mr. Davies said Berea College (not a state institution) has been very aggressive in this regard. Mr. Vanhook said the Berea project involved the major renovation of a historic building, which had structural problems. The interior also had minimal light, and a lot was done to improve the lighting. Mr. Davies added that because the center of the building collapsed during the renovation, an atrium was created. The building is now a showplace.

Noting that much of the discussion had focused on new construction, Representative Rand asked about existing structures. Mr. Davies said training also is available on addressing these issues in existing buildings.

Relative to some of the questions that had just been raised, Ms. Ingram explained that information on the use of LEED in other states and on the specific LEED standards and point system was provided on pages 11 through 14 of Agenda Item VI in the members' folders. She also reviewed the other folder materials including a summary of CPAB recommendations and state government actions relating to energy efficiency and savings.

Representative Crimm asked if the point system would be used to assist the Board in making its project recommendations in the next statewide capital plan. Ms. Ingram said the LEED scoring is much more specialized than the information available in the capital plans, but the Board may wish to develop some type of scoring system to use in its review of the plans.

Representative Rand said the next presentation would be by the Finance and Administration Cabinet. Jim Abbott, Commissioner of the Department for Facilities and Support Services, was accompanied by Deputy Commissioner Ken Marks, Director of

the Division of Engineering and Contract Administration Paul Gannoe, and Energy Savings Performance Contracting (ESPC) Program Coordinator Joe Wolford.

Noting that his office administers the majority of the state's capital construction program, Commissioner Abbott said the 2005 and 2006 sessions of the General Assembly authorized a very large number of projects, which his staff is now responsible for managing.

Commissioner Abbott described several updates and improvements in the Division of Engineering and Contract Administration. He said a new module in the state's ARCHIBUS property management database will be used by managers to track the construction process on individual projects. An updated project accounting/filing system will make it easier to identify and cross reference earlier construction projects so staff will have a historical reference for projects being undertaken in a given facility.

Commissioner Abbott said his department's policy/procedures manual that was compiled in 1986 has now been replaced by a new manual. The 12 chapters focus on process and will help private firms doing business with the state by providing direction on the quality of the facility to be constructed. Commissioner Abbott said the manual incorporates requirements of the new state building code as adopted in 2005, and while there are still differences between LEED and the code requirements, that gap has been reduced significantly. One chapter in the new manual addresses the process of building commissioning.

Commissioner Abbott said his office currently has two projects underway that involve the use of an outside commissioning agent. They are construction of the new building for Bluegrass Community and Technical College in Lexington and renovation of the 30,000 square foot State Office Building in Frankfort. He added that the Frankfort project is the largest renovation of a state facility ever undertaken in Kentucky.

Relative to state ESPC projects, Commissioner Abbott reported that implementation is complete on nine contracts, two implementation contracts are ongoing, and 11 implementation contracts are pending in various stages of development. He said the projects completed to date have successfully reduced energy costs and also corrected numerous operational issues at the facilities involved. As an example, three buildings administered by the Finance Cabinet (the London and Madisonville State Office Buildings and the CHR Building in Frankfort) were upgraded using a combination of ESPC and maintenance pool funding. As such, previously requested line item funding is no longer needed. The upgrades included items such as new roofs, new HVAC systems, electrical updates, and new lights.

Commissioner Abbott concluded by saying that his department's program to pre-purchase natural gas has also resulted in significant savings - approximately \$500,000 in 2005.

Mr. Hicks said ESPCs have been a good tool for funding projects and that now in the budget process consideration is given to whether a requested project is a candidate for ESPC financing rather than direct appropriation.

In response to a question from Mr. Hicks, Commissioner Abbott said commissioning adds 1.5 to 2.0 percent to the project cost. He noted that sometimes their ability to do commissioning is limited by money and time issues and other needs that must be addressed. Mr. Hicks noted that the ability to implement energy efficiency measures is sometimes restricted by the lack of pre-planning or the lack of an adequate budget.

In response to questions from Senator Westwood, it was noted that energy efficiency can be achieved when follow-ups are done to ensure that the building and equipment operate in accordance with the design specifications.

Relative to Senator Westwood's question about the timing of the natural gas purchases, Commissioner Abbott said some was purchased before Hurricane Katrina and some after the hurricane hit in 2005 and prices rose. This year the state has been making purchases since April.

Mr. Cowgill asked whether expertise in designing energy efficient projects is required when the state is hiring design professionals and to what extent green building design expertise is currently available in the market from which the state selects the consultants for its building projects. Mr. Abbott noted that this type of construction is increasing and the demand for such expertise is growing, such that the market is responding to the demand.

Mr. Abbott commented that while great progress has been made, sometimes there are still problems. As an example, he cited the renovation of South Wing C at the Kentucky Fair and Exposition Center, which was 90 percent complete when it was found that the light fixtures being used were not energy efficient. On the other hand, he noted that the new Transportation Cabinet Office Building in Frankfort was designed and constructed to be LEED qualified, but the certification process was not pursued.

Mr. Abbott also noted that funding is needed for the Energy Program Advisor position in his department, which had been partially funded by a grant secured by the Kentucky Office of Energy Policy.

The final presentation related to the new classroom/lab building to be constructed by KCTCS in Lexington at the Cooper Campus of Bluegrass Community and Technical College (CTC). Eric Shaffer, KCTCS System Architect, explained that it is the intent of KCTCS to construct pursuant to the LEED standards in order to acquire a better facility. Silver certification will be sought for the project. Mr. Shaffer said Phase A design has been completed by the project architect Ross-Tarrant. Sustainable Design Group from Maryland is providing LEED consulting services, and the commissioning agent is Paladin Inc. of Lexington. Mr. Shaffer then introduced Martha Tarrant, AIA, who is president of Ross-Tarrant Architects, Inc. and architect for the Bluegrass CTC facility, to make a presentation on the project.

Ms. Tarrant said reasons to follow the LEED design criteria include having better design, better construction, fewer errors and change orders, and reduced energy costs. Benefits of LEED include the wise use of resources, providing a healthy and productive environment, energy efficiency, reduced operating costs, protecting the environment, and having a measurable tool to meet goals and third-party accountability. LEED certification occurs after construction and upon completion of the third party analysis.

Ms. Tarrant next reviewed slides showing the design of the Bluegrass CTC facility including the site plan, floor plans of the three floors, and the exterior elevations.

Ms. Tarrant explained the six categories of LEED features and how the KCTCS building will address them in seeking silver level certification. The categories are sustainable site, water efficiency, energy and atmosphere, materials and resources, indoor environmental air quality, and innovation. Having a sustainable site involves public transportation access, restoring pavement to plants, having a green roof, reduced storm water runoff, reduced "heat-island" effect, reduced light pollution, and maximizing north/south exposure for day light. Relative to water efficiency, the project is expected to reduce municipal water usage by 30 percent. Relative to the energy and atmosphere category, the project will use no CFC-based refrigerants, will reduce energy usage by 15 percent, and will use building commissioning to ensure proper system operation. With regard to materials and resources, the facility will be constructed using recycled, sustainable, low maintenance, and regional building materials and construction debris will be recycled. It will also encourage recycling by occupants. Indoor environmental air quality will be addressed by the following: ventilation systems, materials and construction systems that prevent the introduction of harmful chemicals, individual room controls for lights and HVAC, day lighting, and green housekeeping. Innovations involved in the project include features to educate users, environmental education courses, and faculty and occupants that will be actively involved in sustainability.

Ms. Tarrant explained that using natural sources (daylight) to light the building results in savings on electrical costs and there is a domino effect since by not producing heat from lights, less cooling is required and the air conditioning can be downsized. She

also noted that two studies have validated that students perform better when day lighting is used.

Relative to the cost/benefit analysis, Ms. Tarrant said the cost of doing LEED is 2 percent greater than standard construction. This includes the expense of the outside commissioning agent that is required to ensure systems operate properly and as designed. The projected savings on the Bluegrass CTC project, based on computer modeling, are \$22,000 annually in energy costs and \$4,000 annually in water costs. The facility will also serve as a model for future buildings in the state. She noted that the cost of doing a green project depends on the design team and what features are incorporated into the building.

In response to Mr. Hintze's question about how energy savings are determined, Ms. Tarrant explained it is part of the work of the engineering consultant. They must also certify compliance with state energy code requirements for the project to receive a building permit. Commissioner Abbot added that under an ESPC, the energy savings contractor does an audit relating to the mechanical systems and underwrites the cost of improvements to the building based on the projected savings.

Mr. Fletcher asked about the plan to use plants on the roof and whether the maintenance costs of doing that had been taken into account. Ms. Tarrant said she is not aware of any long-term maintenance problems and noted that Chicago is a leader in the number of green roofs on its buildings. While the plants must be kept alive and sun exposure is an important factor, some plants such as sedum can go dormant and come back the next season. Responding to a further question from Representative Crimm about the increased structural load requirements of such a roof, Ms. Tarrant said the KCTCS project will use a tray system of low-rooting plants in a small amount of soil so no extra structure will be required to hold the weight. She added that some projects use a different system and must be constructed to hold additional weight.

Mr. Shaffer said the building is in Phase A design. Ms. Tarrant said construction is scheduled to begin in Spring 2007, with completion in 2009.

Responding to Mr. Cowgill's question about the LEED certification process not occurring until after the project is completed, Ms. Tarrant said it is dependent on documentation of compliance with the various standards. For example, the contractor must show how much construction waste there was and where/how it was discarded. Mr. Shaffer explained that payment to the contractor will depend, in part, on compliance with the requirements and documentation.

Ms Tarrant addressed Mr. Cowgill's questions about the energy provisions of the state's building code by noting that these are standards that all new buildings must meet.

However, by constructing the KCTCS facility to achieve LEED certification, the intent is to exceed the state standards.

Representative Rand asked if requirements of the LEED certification limit the number of contractors willing to do a project. Ms. Tarrant said there are contractors who have already gone through the process and more will be willing to do so in the future. It is just a different way of doing things.

Senator Westwood asked about the Center for Advanced Manufacturing to be constructed at Gateway CTC in Northern Kentucky. Mr. Shaffer said LEED certification will not be sought, but the facility will be constructed to be energy efficient, and an effort will be made to exceed the minimum code requirements.

Representative Rand thanked these presenters from the executive branch, then invited Mr. Vanhook, General Manager for Facilities for the Administrative Office of the Courts (AOC), to comment on energy efficiency in projects overseen by the judicial branch.

Mr. Vanhook said, as required by House Bill 734 enacted by the 2002 General Assembly, the Chief Justice has adopted Rules of Administrative Procedure Part X to guide the court facilities design and construction process. He said that, similar to reaction to the LEED standards, some contractors were initially hesitant to do court projects under the new Rules. However, now most want to participate in constructing court projects.

Mr. Vanhook said the AOC guidelines do not mandate LEED or other certification processes, but AOC does try to be proactive in its energy efficiency and related requirements for new facilities. He noted that the guidelines require the use of day lighting and high efficiency fixtures to control energy costs. For existing buildings, there are energy audits to identify items that can be addressed and that have a short-term payback. He said following construction, the systems that are installed must be properly managed, and AOC works with the counties to achieve this including identifying outside companies that can provide the necessary expertise.

Mr. Fletcher commented that the courthouses in the western part of the state are wonderful. In response to a question from Representative Crimm about the Robertson County courthouse, Mr. Vanhook said the project to construct a new facility there is in the design development stage.

In conclusion, Mr. Vanhook noted that the Chief Justice and AOC staff have been invited to make a presentation on Kentucky's court facilities construction process at an October meeting of the American Institute of Architects, Academy of Architecture for Justice.

Representative Rand asked Ms. Ingram to discuss plans for the next meeting. Ms. Ingram said the goal is to meet in September at one of the state parks. Members will be polled relative to a specific date.

After an announcement that there would be a tour of the KCTCS System office upon adjournment, the meeting was adjourned at 12:10 p.m.